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36914

TAT-02-F-05984

Sampling and Operations Plan for Asbestos Dump
Meyersville, New Jersey
As part of NPL Removal Assessment, 1990

Prepared for:
Nick Magriples
Removal Action Branch
U.S. EPA Region II
Edison, New Jersey 08837

Prepared by:
Beverly Lawson

Region II Technical Assistance Team
Roy F. Weston, Inc.
Edison, New Jersey 08837

LIST OF APPENDICES

Removal Action Branch
U.S. EPA Region II
Edison, NJ 08837

TABLE OF CONTENTS

LIST OF FIGURES

1. PROJECT NAME: Asbestos Dump
Meyersville
Morris County, NJ

2. PROJECT REQUESTED BY: Nick Magriples
Removal Action Branch

3. DATE REQUESTED: August 9, 1990

4. DATE OF PROJECT INITIATION: August 2, 1990

5. PROJECT ORGANIZATION AND RESPONSIBILITY:

The following is a list of key project personnel and their corresponding responsibilities:

Nick Magriples, USEPA	Project Director
Beverly Lawson, TAT II	Overall Project Coordination Sampling Operations QC
Anibal Diaz, TAT II	Laboratory Coordination & QC

6. PROJECT DESCRIPTION:

A. Site Description

The Asbestos Dump site consists of four areas located in Morris County New Jersey which together comprise a National Priority List (NPL) site. Two of these areas; the New Vernon Road site and the White Bridge Road site are the focus of this sampling operation. A brief history of these areas follows.

The New Vernon Road site consists of approximately 30 acres of land off New Vernon Road, in Meyersville, New Jersey. The New Vernon Road site was operated as a corn and dairy cattle farm from 1945-1980. During the late 1960's, asbestos refuse consisting of loose asbestos fibers, broken asbestos tiles and sidings was landfilled in two areas of the site. A small depression in the westernmost section of the property was filled first. Then, a larger depression in the middle of the property was filled. Both areas were later graded and seeded. The New Vernon Road site contains asbestos wastes in a small landfill area in front of the private residence, in the main landfill area in the center of the property, along the dirt path that traverses north-south along the middle of the property, and in the area of the shed located next to the private residence. The thickness of the waste is not known.

The White Bridge Road site consists of about 12 acres also located in Meyersville, New Jersey. The site is bordered by the Great Swamp National Wildlife Refuge to the east and south and by private residences to the north and west. The site was a farm until 1969, when the current owner conducted

E. Parameter Table

1. Aqueous Samples:

Parameter	Sample Matrix	Sample No.	Analy. Mth. Ref.	Sample Prep.	Holding Time	Limit of Detection	Volume	Preserv.
Asbestos	Solid	*	TEM	N/A	N/A	N/A	50 g	N/A
Grass Cuttings	Solid	*	TEM	N/A	N/A	N/A	25 g	N/A
Dust Samples	Solid	*	TEM	N/A	N/A	N/A	25 g	N/A

* The actual number will be based upon availability.

7. Sampling Procedures:

All soil samples will be collected between 0-6 inch depth using a trowel. The sample will then be transferred to a wide mouth 4 oz glass jar. The grass cuttings will be collected from the lawn mower using a trowel and transferred to a wide mouth 4 oz jar. The dust samples will be collected from the inside of a vacuum cleaner bag by pouring the samples directly into the sample jar. If this is not feasible, then the samples will be collected with a trowel and transferred to a wide mouth 4 oz jar.

8. Sample Containers:

All sample containers will be I-Chem laboratory precleaned glassware, as specified by the USEPA Sample Management Office Contract Lab Program.

9. Sample Label:

Each sample will be accurately and completely identified. All labels will be moisture resistant and able to withstand field conditions. Sample containers will be labeled prior to sample collection. The information on each label will include the following, but is not limited to:

i. Date of collection
ii. Site name
iii. Sample identify/location
iv. Analysis requested

14. Corrective Action:

All provisions will be taken in the field and laboratory to ensure that any problems that may develop will be dealt with as quickly as possible. This will be done to ensure the continuity of the sampling program. Any deviations from this sampling plan will be noted in the final report.

15. Reports:

Laboratory results and all requested QA/QC information will be submitted to EPA upon completion of sample analyses. Sampling reports will be issued after receipt of laboratory results.

16. Project Fiscal Information:

Sampling equipment and manpower shall be provided by the Technical Assistance Team (TAT) in coordination with the USEPA. All man-hours expended by TAT will be charged to TDD = 02-90-0113.

Appendix A

LABORATORY BIDS

ANALYTICAL PROJECT APPROVAL SHEET

DATE: 7/2?/90 REGION: Two (II)

LAB CONTACT: Anibal Diaz / Andre' Bradnett

LAB: (IATL) International Asbestos Testing Laboratories

SITE NAME: Asbestos Dump

DUE DATE: Verbals Not Required

COST: $

TURNAROUND TIME: 7 days from VTSR

ANALYSES: [illegible] soil samples, dust from vacuum, TEM w/ breakdown by [illegible] of different types of asbestos

QC: STANDARD CLP TERMS ______ OTHER (specify): % breakdown of type of asbestos

CLP SAS #: 02-9007-102/0759

3 BIDS SOLICITED? ✓ YES ______ NO

CLP CONTACTED? ✓ YES ______ NO

BASIS OF SELECTION: Insufficient time for CLP/EPA

APPROVAL BY:

SIGNATURE

ABD 002 0092

MDE 0008477

WESTON

EXPENDABLE MATERIALS REQUISITION

No. E ~~75328~~ 02-1041

TO: Debbie Hickman

FROM: Andre' Bridgett Date: 7/25/90

PURCHASING USE ONLY	
Purchase Order Assigned:	16-1240
Purchase Order Date:	7/25/90

Request that we obtain: ✓ Purchase ___ Rent ___ Repair ___ Price Quotation ___ Other

FROM: (Vendor name if preference)
International Asbestos Testlabs (IATL)
36 N. Pine Ave.
Maple Shade, NJ 08052

SHIP TO: Roy F. Weston
Suite 201
1090 King Georges Post Rd.
Edison, NJ 08837

SHIP VIA: Best Available

FOB ___ TERMS ___

DELIVERY REQUIRED BY: Written 7/10/90

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
	2	Analysis of soil surface, grass cutting, vacuum dust samples for asbestos by TEM		
		Terms and QA Requirements As specified in Std. QA TAT-02-F-05981 Written: 7 days from VTSR Penalty: 3% First Day Late 2% Second Day Late 1% Each additional Day late No Subcontracting Allowed		

ABD 002 0093

Is this purchase in your Operating Plan? Yes (✓) No ( ) TOTAL COST

Charge above items to: 2962-31-02 0759 Asbestos Dump / EPA 8060
Work Order No. Project/Client Title Div./Dept. No.

Project Director/Manager or Responsible Head Approval: [signature] Date 7/25/90

Business Mgr. Rev. ___ Date ___

MDE 0008478

Purchasing Approval ___ Date ___

WESTON Suite 201, 1090 King Georges Post Road.
Edison, NJ 08837, • (201) 225-6116 • FAX (201) 225-7037

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-7367

TAT-02-F-05981 **MEMORANDUM**

TO: Jean Williamson
International Asbestos Testing Laboratories

FROM: Andre' Bridgett, TAT II

DATE: July 24, 1990

SUBJECT: Contractual Agreement for Analysis of Samples from Asbestos Dump for Asbestos

The purpose of this memo is to document our verbal agreement of July 24, 1990, concerning the analysis of twelve (12) soil samples for Asbestos. The samples will be delivered to you on or before August 3, 1990. The following commitment was made by IATL.

1. The analysis of these samples will conform to TEM, which will include a breakdown by percentage of the different types of Asbestos.

2. The total cost for the analysis will be $3,600.00.

3. The QA/QC will consist of performing and retaining a calibration and running as many duplicates as necessary to establish precision.

4. Laboratory turnaround time for all samples submitted will be seven (7) days to written report. The written results will, therefore, be available at Weston no later than August 10, 1990. For delays, not due to acts of God, a reduction in the total charge will be 1 percent for the first day, an additional 2 percent for the second day and an additional 1 percent for each additional day.

If there are any questions concerning this memo, please contact me at (201) 225-6116.

ABD 002 0094

MDE 0008479

WASKAN

TELEPHONE QUOTE / VERBAL QUOTE

Purchase Order Justification Worksheet

REQ'N. NO. [illegible] 91

NAMES OF BIDDERS/QUOTED PRICES

ITEM NO.	QTY	PART/MODEL	DESCRIPTION OF SUPPLIES/SERVICES	1 [illegible]	2 [illegible]	3	4	5 [illegible]
1	12	[illegible]	[illegible]		[illegible]			
2								
3								
4								
5								
6								
7								
8								
9								
10								
TRANSPORTATION CHARGES:								
TOTAL VENDOR QUOTATION								
DELIVERY AND/PAYMENT TERMS								
SHIP VIA/FOB POINT								
VENDOR CONTACT				[illegible]	Bill [illegible]	[illegible]	[illegible]	Tony [illegible]
VENDOR TELEPHONE NUMBER				[illegible]	[illegible]	[illegible]		(609)[illegible]-9051

SOLE OR SINGLE (PREFERRED) SOURCE JUSTIFICATION

1. Only known source
2. Only source meeting technical requirements
3. Only source compatible with existing equipment
4. Support services for existing vendor equipment
5. Continuation of vendor rental/lease equipment
6. Customer preference*
7. Buyer's choice
8. Remainder of supplies/services
9.

COMPETITIVE SOURCE SELECTION JUSTIFICATION

1. Technically superior*
2. Low competitive bidder (See above competitive quotes) ✱
3. Only source meeting required delivery
4. Compatibility with existing equipment
5. Continuation of vendor furnished supplies/services
6. Proximity of source
7. Standard catalog item
8.

PRICE JUSTIFICATION/EVALUATION

1. Competitive quotation (See above competitive quotes) ✱
2. Catalog/published pricelist*
3. GSA Federal Supply Schedule*
4. Established Market Price*
5. Negotiated Price*
6. Certification of price
7. Comparison with prior purchase*
8. Buyer's discretion
9. Blanket Purchase Agreement with qualified source (up to $10K)
10.

BASIS FOR P O AWARD

1. Technical capability
2. Fair and reasonable price ✱
3. Acceptable delivery schedule
4. Sole/single source award
5. Competitive source selection ✱
6. Compatibility with existing equipment
7. Continuation of vendor furnished supplies/services
8.

MDE 0008480

ABD 002 0095

Northeastern Operations

Raritan Center
160 Fieldcrest Avenue
Edison, NJ 08837
(201) 225-6040
Fax (201) 225-4577

Clayton
ENVIRONMENTAL
CONSULTANTS

July 25, 1990

Mr. Andre Bridgen
ROY F. WESTON
1090 King Georges Road
Suite 201
Edison, New Jersey 08837

Dear Mr. Bridgen:

Subject: Analytical Services for the Asbestos Dump Project

Confirming our telephone conversation of July 24, 1990, Clayton Environmental Consultants, Inc. will provide analytical services to Roy F. Weston for the asbestos dump project as you requested. The following scope of work is based on the information you provided.

Roy F. Weston will submit 10 to 12 samples to Clayton on August 2, 1990. The samples will include soil surfaces, grass cuttings, and vacuumed dust. Clayton will perform transmission electron microscopy (TEM) analysis for the submitted samples. TEM is specific for asbestos and determines the percent and type asbestos fibers in a material sample.

Clayton will provide these services using its commercially reasonable best efforts consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

Clayton will provide the analytical services described herein at per sample. A 7-calendar-day turnaround time will be provided for analytical results from the date samples are received.

Enclosed is a copy of our standard Terms and Conditions (Item A. Laboratory [U.S.] - 11/88) which are incorporated in this confirmation letter as if set forth herein in full.

Thank you for the opportunity to provide our services to Roy F. Weston. Please call if you have any questions.

Sincerely,

Odette Mina

Odette B. Mina
Technical Supervisor
Laboratory Services

OBM/ge
Enclosure

ABD 002 0096

MDE 0008481

July 24, 1990

Andre Bridgett
Roy F. Weston
1090 King George Post Road
Raritan Plaza Suite 210
Edison, NJ 08837

Dear Mr. Bridgett:

Thank you for choosing International Asbestos Testing Laboratories (IATL) for transmission electron microscopy analysis of your bulk samples.

IATL is a wholly owned subsidiary of Environmental Control Group (ECG), a public corporation with 1989 sales of $77 million. Our full range of capabilities include phase contrast microscopy (PCM), polarized light microscopy (PLM), scanning electron microscopy (SEM), transmission electron microscopy (TEM) for the analysis of asbestos. Additionally, IATL now analyzes lead samples by atomic absorption spectrophotometry (AA).

The professional staff at IATL maintains the highest standards in quality control and is fully accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). IATL also participates in the NIOSH Proficiency Analytical Testing Program (PAT) and the American Industrial Hygiene Association (AIHA) Asbestos Analyst Registry (AAR).

As we discussed on the telephone today, IATL will perform bulk sample analysis by transmission electron microscopy for your up coming project at [illegible]) each. IATL will provide one week turnaround for your twelve bulk samples with the certificate of analysis to be faxed and then hard copy to be mailed within three working days of completed analysis.

Should you have any questions regarding our laboratory, please do not hesitate to contact me. I look forward to working with you.

Sincerely,

Jean K. Williamson
Laboratory Director

ABD 002 0097

MDE 0008482

princeton testing laboratory inc.

Princeton, NJ 08543-3108
(609) 452-9050
FAX (609) 452-0347

July 24, 1990

Roy F. Weston, Inc.
1090 King Georges Post Road
Suite 201
Edison, NJ 08837
(201) 225-6116

Attn: Andra Bridgett

Dear Mr. Bridgett:

Based on our conversation this afternoon, I have developed the following cost schedule:

Transmission Electron Microscopy Analysis . . . . .)/sample

Bulk samples of soil, dust, and grass cuttings will be analyzed for asbestos content.

Samples will be pre-weighed, then desiccated overnight at approximately 400°F. The remaining sample will then be washed with dilute HCl acid and placed in centrifuge. The final dry weight will be determined and TEM analysis will be performed for percentage and type of asbestos.

If you have questions, or require additional information, please contact me.

Very truly yours,

Tony Damato
Program Manager
Industrial Hygiene

TD/rk
Proposal #0409

ABD 002 0098

MDE 0008483

Precautionary Measures Against Hidden Hazards in Laboratory Samples

Background

Under the authority of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) of 1980, Section 311 of the Clean Water Act, and Subtitle I of the Resource Conservation and Recovery Act (RCRA), EPA has been delegated the responsibility to undertake response actions with respect to the release or potential release of oil, petroleum, or hazardous substances that pose a substantial threat to human health or welfare, or the environment. In addition, EPA provides technical assistance to help mitigate endangerment of the public health, welfare or environment during other emergencies and natural disasters.

EPA's successful implementation of these emergency response action responsibilities requires that technical support capabilities be provided in the form of contracted Technical Assistance Teams (TAT) for each EPA Region. The WESTON TAT Contract 68-01-7367 provides support to EPA Regions I, II, III, IV, V, ERT - Edison, and Headquarters - Washington,DC.

Notice to Laboratory Management

The samples which will be shipped to your laboratory for analysis in accordance with applicable D.O.T. or IATA Regulations have been collected by the WESTON TAT and have been tentatively designated by the field response team as either environmental or hazardous material samples.

In general, *Environmental Samples* are collected from streams, farm ponds, small lakes, wells, and off-site soils that are not reasonably expected to be contaminated with hazardous materials. Samples of on-site soils or water, and materials collected from drums, bulk storage tanks, obviously contaminated ponds, impoundments, lagoons, pools, and leachates from hazardous waste sites are considered *Hazardous Samples*. Samples which are obtained from a known radioactive material contamination site or which demonstrate beta or gamma activity greater than three times average background as scanned with a Geiger-Mueller radiation survey meter are considered *Radioactive Samples*.

The samples which will be submitted to your laboratory have been tentatively classified by the field response team as:

____ Environmental ____ Hazardous ___/___ Comb. Envir.& Haz.) ____ Radioactive

The field team which collected the samples used the following Level(s) of personal protection as designated by EPA and OSHA conventions to provide protection against possible radiological or chemical exposure:

____ Level A ___/___ Level B ____ Level C ____ Level D

This information is intended for use as a guide for the safe handling of these laboratory samples in accordance with EPA and OSHA regulations. The sample classification(s) and Level(s) of personal protection used by the WESTON TAT are not represented to be, nor are they adequate or applicable in all situations, nor are they intended to serve as substitutes for professional/personal judgement.

Execution of this form is a condition precedent to Award of a laboratory services subcontract.

This form was prepared by: Anibal Diaz 7/25/90
Analytical Services TDD No. [illegible] Date
WESTON Office: Region 2 TAT Phone: 201-225-6116 FAX: 201-225-7037
Laboratory Name: TAT L

Accepted by: _____ Title: _____
Authorized Signature Date

ABD 002 0099

MDE 0008484

REGION II ANALYTICAL SERVICES PROCUREMENT

TO: DPO, Norman Vogelsang

FROM: TAT Analytical Coordinator ....Andre [illegible]....

ATT. ....[illegible]....

Site Name ....[illegible]............ Site ID#............

Site TDD# ....[illegible]............ W.O.#....[illegible]............

Total analytical services & special projects funding at this site to date SP....2.... AS....3....

Proposed sampling date....[illegible].... Total number of samples....2....

Number of Samples	Sample Type	Analysis Required	QA/QC Required	Cost Per Sample
[illegible]	[illegible]	[illegible]	[illegible]	

Analysis to be done by:			Contact	Date of Request	Date Reply Requested	Date of Reply	Estimated Total Cost
EPA Edison:	Yes ___	No ✓	[illegible]	[illegible]	[illegible]	[illegible]	—
CLP Lab:	Yes ___	No ✓					—
TAT Lab:	Yes ___	No ___					
TAT Analytical Services:	Yes ✓	No ___	[illegible]	[illegible]	[illegible]	[illegible]	

Justification for laboratory [illegible]

Samples delivered to lab: Date: [illegible] Time: ______ Carrier: ______

Verbal results required: Date: NONE Delivered: ______

Written results required: Date: [illegible] Delivered: ______

Entire Project Completed: Date: [illegible]

Additional Comments [illegible]

cc: EPA PM: [illegible]

TAT PM: [illegible]

Purchasing Dept., Weston (if applicable

Analytical Services File (if applicable TDD

ABD 002 0100

MDE 0008485

Appendix B

TEM METHOD

DRAFT

2.2A TEM Water Sample Preparation Procedures

Background: Transfer of particulate from sampled water is essential. The object is to produce an intact carbon film containing the particles from the filter surface which is sufficiently clear for TEM analysis.

Transfer of Suspended Particulate

1. A vacuum filtration system is utilized to collect the suspended particles in the sample.
2. Place a 0.5um filter on the holder to act a dispersion pad. On this place a 0.45um filter to catch the particles.
3. Remove a measured amount of the sample to be filtered. If the amount is less than 15ml. then add 20-30ml. of particle free water to the sample prior to filtering to ensure an even distribution of the specimen.
4. Slowly introduce the measured sample to the filter funnel as to not damage the filter. Swirl the funnel to ensure that the specimen is homogenized.
5. Allow to settle for a moment before introducing vacuum. Apply suction until the sample has been filtered completely. (DO NOT RINSE THE FUNNEL WALLS WILE THE FILTER IS IN PLACE THIS WILL DISTURB THE SAMPLE DISTRIBUTION)
6. Do a series of dilutions. ie; 1mm, 5mm, 10mm etc.
7. Allow the filter minus the diffusion pad to dry thoroughly under NEGATIVE air.

SEE MCE FILTER PREP. TO COMPLETE PROCEDURES

ABD 002 0102

DRAFT

2.2c TEM Solid Sample Preparation Procedures

Background: Homogenized breakdown of solid specimen to dissociate asbestos particulate. The object is to produce an intact carbon film containing the particles from the specimen which is sufficiently clear for TEM analysis.

Acquisition of Fibrous Particulate

Treatment #1: (Allows for Percent Estimation)

1. Bulk-solid samples are gently and slowly ground to a powder.
2. A weighed portion is then suspended in a known volume of particle free water and briefly ultrasonicated to disperse the particulate.
3. The solution is then placed into a volumetric flask and brought to volume with particle free water.

   Treated as a water sample.
   (See Section 2.2b Water Sample Preparation)

Treatment #2: (Does Not Allow for Percent Estimation)

1. Weighed shaved cross sections of the sample are placed onto a clean watch glass.
2. Tetrahydrofuran (THF) is then slowly pipetted onto the sample to carefully dissolve the surrounding matrix material.
3. After the THF has sufficiently dried the sample is then oxygen plasma ashed for 15 minutes.
4. The sample is then placed into 100ml. of particle free water.

   Treat as a water sample.
   (See Section 2.2b Water Sample Preparation)

Appendix C

Soil Sampling SOPs

SOIL SAMPLING SOP

This recommended protocol outlines procedures and equipment for the collection of representative samples from surface and subsurface locations.

Surface sampling commonly refers to the collection of samples at a 0-6 inch depth. This is most efficiently accomplished with the use of a trowel or scoop. For samples at lower depths, a decontaminated bucket auger or power auger may be needed to advance the hole to the point of collection. Another clean bucket auger can then be used to collect the sample. For samples at depths greater than three feet, the use of a drill rig and split spoon sampler will be necessary. In some situations, sample locations can be accessed with the use of a backhoe.

Whether surface or subsurface, and whether a bucket auger or drill rig is used to access the sample, several considerations are important during soil sample collection. An attempt must be made to maintain sample integrity by preserving its physical form and chemical composition to as great an extent as possible. First, the mechanism used to advance the hole must be properly decontaminated. The device then used for actual sample collection should not be same as that used to advance the hole. This instrument should be appropriately decontaminated, as should any instrument utilized to transfer the sample into the sample bottle.

Secondly, care must be taken in handling the sample. The sample should be transferred into the sample bottle as quickly as possible, with no mixing, to assure that the volatile fraction is not lost. It is also recommended that for volatile organics analysis of soils, the laboratory performing the analysis should provide wide mouth bottles (4 ounce) for sample collection. This will reduce disturbance of the sample and may help prevent the loss of volatiles.

Soil sampling is generally accomplished through the use of one of the following samplers:

- scoop or trowel
- tulip bulb-planter
- bucket auger
- soil coring device/sliver bullet sampler
- waste pile sampler
- power auger (in conjunction with another device)
- split spoon sampler
- Shelby tube sampler

1. Surface Sampling